

In the Specification

Please amend the text from page 13, line 29, to page 15, line 29, to recite:

Fig. 1 Table showing balance of toast, blood sugar and insulin. The Table shows how a diabetic with a morning sugar of 144 can determine how much insulin, he would need to take to get back to 144 in two hours if he had 2 toasts. Each toast adds 54 units of blood sugar, so 2 toast = 108 blood sugar. Since 108 units of blood sugar are added, 108 units also have to be removed to get back to 144. If for the diabetic, 1 insulin absorbs 27 units of blood sugar, then 4 insulin will absorb 108. It will take 4 units of insulin to take away the 108 blood sugar added, and bring the diabetic's blood sugar back to 144, as shown in the table.

Fig. 2 Table showing balance of toast, blood sugar and insulin. Insulin activity is considered over time. The table shows that if one used fast-acting insulin that starts to work in one hour, and reaches its peak in 2 hours, then the diabetic can take 4 units of fast-acting insulin.\

Fig. 3 Table showing imbalance of toast, blood sugar and insulin if insulin and sugar are considered to act immediately. Use of longer acting insulin means that more boxes are drawn and a longer time-frame is planned. Insulin activity cannot be considered without considering its effects and activity over time.

Fig. 4 Table showing amounts of toast, blood sugar and insulin. Sugar release from toast and insulin activity are considered over time. The figure shows that the intermediate-acting insulin does very little for 2 hours, and then removes sugar at a rate of 27 blood sugar units for the next 6 hours.

Fig. 5 Table showing amounts of toast, blood sugar and insulin. Figure 5 shows the results that can be obtained if a diabetic wakes up with 144 blood sugar in the morning, and one gives him the insulin 2 hours earlier than planned.

Fig. 6 Table showing amounts of toast, blood sugar and insulin after eating toast 2 hours later than the scenario in Figure 5.

Fig. 7 Table showing amounts of toast, blood sugar and insulin when multiple toasts are ingested at different times during the day. The table shows the impact of eating 1 toast at 9:00 am and 1 toast at 12:00 noon.

Fig. 8A-B Table showing allocation of toasts during the day based on a pattern of 11 "toasts."

Fig. 9A-C Table showing allocation of toasts, blood sugar and insulin during the day. Information on food nutrition is added and the table shows the sequence of filling out the form.

Fig. 10A-C Table showing allocation of toasts, blood sugar and insulin during the day. This table demonstrates the problem of simply taking two insulin shots per day, each two hours prior to the main meals. The patient would spend 17 hours with high blood sugar, with 11 of these in the spilled sugar condition. The blood sugar rises to unacceptable levels until 3 o'clock the next morning.

Fig. 11A-C Table showing allocation of toasts, blood sugar and insulin during the day. The scenario is similar to that in Fig. 10 but the second shot is moved by two hours.

Fig. 12A-C Table showing allocation of toasts, blood sugar and insulin during the day. The table shows provision of 15 units and 7 units in two insulin shots.

Fig. 13A-B Table showing allocation of toasts, blood sugar and insulin during the day. The first insulin shot was increased to 18 and the second shot was decreased to 4. The 9:00 pm snack was moved to 10:00 pm. These adjustments match the food eaten with the insulin taken.

Fig. 14 Table showing allocation of toasts, blood sugar and insulin during the day. The chart tracks the effect of 2 whole-wheat toasts and tea. In two hours, the sugar level in the subject equals his starting level of 144 plus the effect of 2 toasts (72) minus 108, for insulin to equal 108 by noon.

Fig. 15 Table showing allocation of toasts, blood sugar and insulin during the day. The figure shows the effects of a 3 toast lunch meal. Assuming that his 3 toasts are complex carbohydrates,

he would add 63 points per hour. Insulin takes out 54 points per hour, so in 3 hours he adds a net of 27 points for a new total of 117 at 4 p.m.

Fig. 15b Table showing allocation of toasts, blood sugar and insulin during the day. The figures show a 3-toast dinner and the second shot of insulin the planning chart calls for. See fig. 15 also.

Fig. 15c Table showing blood sugar during the day. The figures show a 3-toast dinner and the second shot of insulin the planning chart calls for. See fig. 15 also.

Fig. 16 Table showing allocation of toasts, blood sugar and insulin during the day. The patient got up at 8:00 am. His blood sugar was measured and found that it was at 144 on the scale. So 144 is entered in the "Start Blood" column at 8:00 am. The subject could have had 2 toasts at noon and a small fruit 2 hours after lunch and had nearly the same sugar reading.

Fig. 17A-C Table showing allocation of toasts, blood sugar and insulin during the day. The table shows a situation that required an extra dose of insulin. Alternatively, the regular second shot may be taken earlier than planned with cutting back on the evening meal.

Fig. 18A-C Table showing allocation of toasts, blood sugar and insulin during the day. The chart starts out like that in Figure 17, but assumes that the patient can get by without as much food in the afternoon and evening, after a big lunch. This way, the subject does not have to take an evening insulin shot at all.

Fig. 19A-C Table showing allocation of toasts, blood sugar and insulin during the day. The meal of UC comes in the evening and is accommodated, as shown in the table. The patient's 4:00 pm insulin dosage is increased to 10 units, from its usual 4. While this is not ideal, only one reading is actually spilling over with a 207 reading.

Fig. 20A-B Table showing allocation of toasts, blood sugar and insulin during the day. This Table provides an example of how the short-acting insulin can be matched to meals.

Fig. 21A-B Steps for measuring blood sugar in response to ingesting toast and taking insulin. Two toasts added 108 blood sugar units to the body. To find out the exercise effect, repeat the 8:00 am to 11:00 am part of the experiment, exercise during the morning, and find out the difference, at 11:00 am, between blood sugar after exercise, and that measured in the prior experiment. If the diabetic has two typical exercises, the exercise experiment is done once for each exercise.

Fig. 22 Determining effects of exercise on blood sugar. The chart shows an abbreviated version of Figure 21, which shows how to find the personal exercise effect. If the diabetic has two typical exercises, the exercise experiment is done once for each exercise.

Fig. 23A-C Table showing allocation of toasts, blood sugar and insulin during the day. Step by step approach to the DSS method. The Table shows a charting technique to determine the amount of blood sugar that exercise used up, involving: (Original result at 11:00 – Original result at 8:00) – (Exercise result at 11:00 – Exercise result at 8:00). In an example it is: (288 – 180) – (198 – 144) which equals 54.

Fig. 24A-C Table showing allocation of toasts, blood sugar and insulin during the day. Fast-acting insulin waited an hour, before “kicking in”. Tables described in this application are useful to plan the day's food and insulin intake. The toast effect and personal absorption rate numbers from the personalized experiments assist in this planning.

Fig. 25A-C Table showing allocation of toasts, blood sugar and insulin during the day. The table shows a scenario similar to Fig. 24 where the dose before lunch is moved an hour earlier.

Fig. 26A-C Table showing allocation of toasts, blood sugar and insulin during the day. The table illustrates the results after adjusting the pre-dinner dose from 6:00 to 7:00 pm. An apparently small change in schedule, or in the time it takes insulin (or starches) to work, can have considerable effect on the blood sugar, and hence on health.

Fig. 27A-C Table showing allocation of toasts, blood sugar and insulin during the day. Once the intermediate-acting shot is taken, it has to be “covered” until it wears off.

Fig. 28A-B Determining effects of toast and insulin on blood sugar. Fig. 28 shows steps for a chart (Chart I) that a diabetic subject would use in methods of the invention. The diabetic would check off each step as it is done.

Fig. 29A-C Chart showing toasts, blood sugar and insulin. Fig. 29 shows steps for a second chart (Chart II) that a diabetic subject would use in methods of the invention. The subject could insert determined values of toast effect and absorption rate from the Chart I (fig. 28) into the Chart II.

Fig. 30 Determining effects of exercise on blood sugar. Chart (Chart III) is shown to find out how to allow for the effects of a typical exercise routine on blood sugar.

Fig. 31 (a) to (e) show examples of devices implementing the methods of the invention. (a) shows a generic screen for a device, optionally activated by touch and having a touch menu. The screen optionally shows alerts, for example if the subject needs to take insulin or measure blood glucose or if the device is predicting an abnormally high or low level of blood glucose or insulin. (b) shows a device (eg. a wireless device) having a keyboard as a user interface. Optionally, the device is an e-mail device having a screen showing icons such as the toast icon, chart/measurement icon and insulin (syringe) icon. (c) shows a cellular telephone with the keypad as an interface. The telephone optionally has a touch menu, dynamic touch buttons and alerts. (d) shows a glucometer. A glucometer would optionally have three extra buttons added, compared to a conventional glucometer: Toasts (or other food unit value), Insulin (or mimetic) and Run. This will enable the diabetic subject to utilize the methods without having insert values in a chart or to calculate values by himself. (e) shows an insulin pump. The pump optionally has 3 new buttons: Toasts (or other food unit value), Glucometer Reading and Run.